

MOTOR STARTER 3RM1 SIRIUS DIRECT STARTER 500 V; 1,6-7,0 A; 110-230 V AC SCREW-TYPE CONNECTION SYSTEM



Figure similar

General technical data:	
product brand name	SIRIUS
Product designation	Motor starter
Design of the product	with electronic overload protection
Trip class	CLASS 10A
Protection class IP	IP20
Suitability for operation Device connector 3ZY12	No
Product function Intrinsic device protection	Yes
Type of the motor protection	solid-state
Product function Adjustable current limitation	Yes
Installation altitude at height above sea level maximum	4 000 m
Ambient temperature	
• during operation	-25 ... +60 °C
• during transport	-40 ... +70 °C
• during storage	-40 ... +70 °C
Relative humidity during operation	10 ... 95 %
Air pressure acc. to SN 31205	900 ... 1 060 hPa
Shock resistance	6g / 11 ms

<b>Vibration resistance</b>	1 ... 6 Hz, 15 mm; 20 m/s <sup>2</sup> , 500 Hz
<b>Surge voltage resistance rated value</b>	6 kV
<b>Insulation voltage rated value</b>	500 V
<b>Mechanical service life (switching cycles) typical</b>	30 000 000
<b>Conducted interference</b>	
<ul style="list-style-type: none"> <li>• due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	1 kV
<ul style="list-style-type: none"> <li>• due to conductor-earth surge acc. to IEC 61000-4-5</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>• due to burst acc. to IEC 61000-4-4</li> </ul>	3 kV / 5 kHz
<ul style="list-style-type: none"> <li>• due to high-frequency radiation acc. to IEC 61000-4-6</li> </ul>	10 V
<b>Electrostatic discharge acc. to IEC 61000-4-2</b>	4 kV contact discharge / 8 kV air discharge
<b>Field-bound HF-interference emission acc. to CISPR11</b>	Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC
<b>Conducted HF-interference emissions acc. to CISPR11</b>	Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC
<b>maximum permissible voltage for safe isolation</b>	
<ul style="list-style-type: none"> <li>• between main and auxiliary circuit</li> </ul>	500 V
<ul style="list-style-type: none"> <li>• between control and auxiliary circuit</li> </ul>	250 V
<b>Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>	Q
<b>Equipment marking acc. to DIN EN 61346-2</b>	Q

#### Safety related data:

<b>Protection against electrical shock</b>	finger-safe
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#### Main circuit:

<b>Number of poles for main current circuit</b>	3
<b>Operating voltage rated value maximum</b>	500 V
<b>Relative symmetrical tolerance of the operating voltage</b>	10 %
<b>Operating frequency</b>	
<ul style="list-style-type: none"> <li>• 1 rated value</li> </ul>	50 Hz
<ul style="list-style-type: none"> <li>• 2 rated value</li> </ul>	60 Hz
<b>Relative symmetrical tolerance of the operating frequency</b>	10 %
<b>Operating current at AC-53a at 400 V at ambient temperature 40 °C rated value</b>	7 A
<b>Derating temperature</b>	40 °C
<b>Minimum load [% of IM]</b>	20 %
<b>Power loss [W] typical</b>	3.4 W
<b>Adjustable pick-up value current of the current-dependent overload release</b>	1.6 ... 7 A
<b>Operating power for three-phase motors at 400 V at 50 Hz</b>	0.55 ... 3 kW

<b>Operating frequency maximum</b>	1 1/s
<b>Control circuit/ Control:</b>	
<b>Type of voltage of the control supply voltage</b>	AC/DC
<b>Control supply voltage 1</b>	
<ul style="list-style-type: none"> <li>• at DC rated value</li> </ul>	110 V
<ul style="list-style-type: none"> <li>• at AC</li> <li>— at 50 Hz</li> <li>— at 60 Hz</li> </ul>	110 ... 230 V 110 ... 230 V
<b>Operating range factor control supply voltage rated value</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	0.85 ... 1.1
<ul style="list-style-type: none"> <li>• at AC</li> <li>— at 50 Hz</li> <li>— at 60 Hz</li> </ul>	0.85 ... 1.1 1.1 ... 0.85
<b>Control current</b>	
<ul style="list-style-type: none"> <li>• at AC</li> <li>— at 230 V</li> <li>— in standby mode</li> <li>— during operation</li> <li>— when switching on</li> <li>— at 110 V</li> <li>— in standby mode</li> <li>— during operation</li> <li>— when switching on</li> </ul>	9 mA 22 mA 33 mA 16 mA 36 mA 55 mA
<ul style="list-style-type: none"> <li>• at DC</li> <li>— in standby mode</li> <li>— during operation</li> <li>— when switching on</li> </ul>	6 mA 30 mA 15 mA
<b>Input voltage at digital input</b>	
<ul style="list-style-type: none"> <li>• for signal &lt;1&gt;</li> <li>— at DC</li> <li>— at AC</li> </ul>	79 ... 121 V 93 ... 253 V
<ul style="list-style-type: none"> <li>• with signal &lt;0&gt;</li> <li>— at AC</li> <li>— at DC</li> </ul>	0 ... 40 V 0 ... 40 V
<b>Input current at digital input</b>	
<ul style="list-style-type: none"> <li>• for signal &lt;1&gt;</li> <li>— at AC at 230 V</li> <li>— at AC at 110 V</li> <li>— at DC</li> </ul>	2.3 mA 1.1 mA 1.5 mA
<ul style="list-style-type: none"> <li>• with signal &lt;0&gt;</li> </ul>	

— at AC at 230 V	0.4 mA
— at AC at 110 V	0.2 mA
— at DC	0.25 mA
<b>Switch-on delay time</b>	60 ... 90 ms
<b>Off-delay time</b>	60 ... 90 ms

#### Auxiliary circuit:

<b>Number of CO contacts for auxiliary contacts</b>	1
<b>Operating current of auxiliary contacts</b>	
• at AC-15 at 230 V maximum	3 A
• at DC-13 at 24 V maximum	1 A

#### Installation/ mounting/ dimensions:

<b>Mounting position</b>	vertical, horizontal, standing
<b>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail
<b>Width</b>	22.5 mm
<b>Height</b>	100 mm
<b>Depth</b>	141.6 mm

#### Connections/ Terminals:

<b>Type of electrical connection</b>	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
<b>Type of connectable conductor cross-sections for main contacts</b>	
• solid	1x (0,5 ... 4 mm <sup>2</sup> ), 2x (0,5 ... 2,5 mm <sup>2</sup> )
• finely stranded	
— with core end processing	1x (0,5 ... 2,5 mm <sup>2</sup> ), 2x (0,5 ... 1,5 mm <sup>2</sup> )
<b>Type of connectable conductor cross-sections at AWG conductors for main contacts</b>	1x (20 ... 12), 2x (20 ... 14)
<b>Type of connectable conductor cross-sections for auxiliary contacts</b>	
• solid	1x (0,5 ... 2,5 mm <sup>2</sup> ), 2x (1,0 ... 1,5 mm <sup>2</sup> )
• finely stranded	
— with core end processing	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1 mm <sup>2</sup> )
<b>Type of connectable conductor cross-sections at AWG conductors for auxiliary contacts</b>	1x (20 ... 14), 2x (18 ... 16)

#### UL ratings:

<b>Full-load current (FLA) for three-phase AC motor at 480 V rated value</b>	6.1 A
<b>Yielded mechanical performance [hp]</b>	
• for single-phase AC motor	
— at 110/120 V rated value	0.25 hp
— at 230 V rated value	0.5 hp

- for three-phase AC motor
  - at 200/208 V rated value
  - at 220/230 V rated value
  - at 460/480 V rated value

1 hp  
1.5 hp  
3 hp

## Certificates/approvals

### General Product Approval

### Declaration of Conformity



### Test Certificates

### other

[Typrüfbescheinigung/Werkszeugnis](#)

[spezielle Prüfbescheinigungen](#)

[Umweltbestätigung](#)

[Bestätigungen](#)

## Further information

### Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RM10071AA14>

### Cax online generator

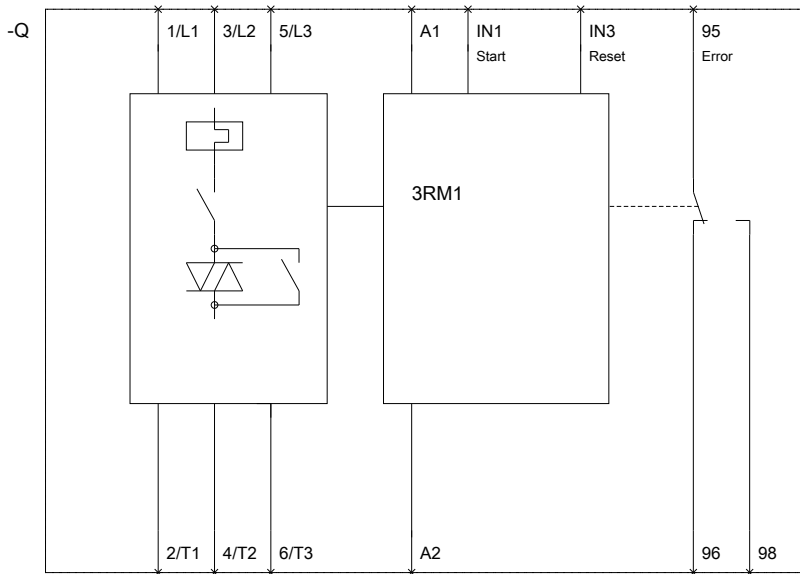
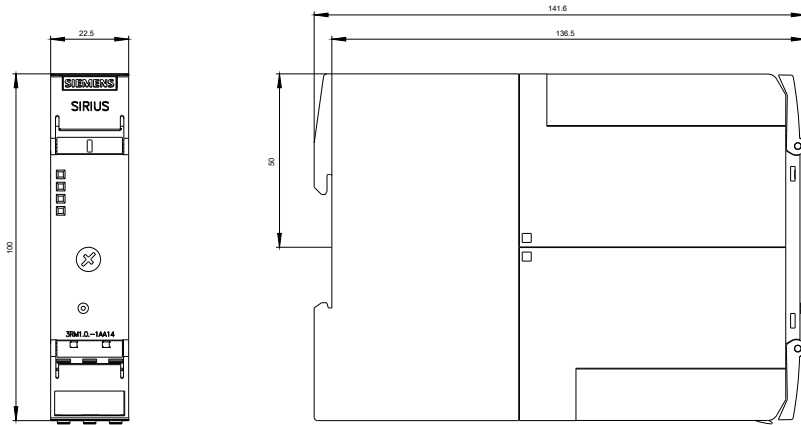
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RM10071AA14>

### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RM10071AA14>

### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RM10071AA14&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RM10071AA14&lang=en)



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